

A)

1 MAQEQGHFQLLRADAIRSKLIDTFSLIEHLQGLSQAVPRHTLREILDPAY
 51 QQKLMMSGDQEQLVRFSTIKPRRMGHITHSRRLLSRERVRCSRMPPSLWAG
 101 WVLDSVFSKFIISLIFLNTFVLMVEIELMESTNTALWPVKLALEVADWE
 S1
 151 ILLSFIVEIILMWLASFSLFWKDawnVFDFVTLLSLLPELVVLLGVPAH
 S2 S3
 201 SVWLQLLRVCRLRSLKLFARFROIKVILLALVRALKSMTFLLMLLLIF
 S4 S5
 251 YIFAVTGVYFFREYSRSTIEGLEYNMFFSDLLNSLVTVFILFTLDHWYAV
 P
 301 LQNIWKVPESSRVFSSIYVILWLLGSIIFRNIIIAMMVTFQNIRESLS
 S6
 351 EEMSHLEVQYKADMFKQQIIQRQRQHSESRLGTSLGKVSEDIETSDASDD
 401 DDDDDDDDDDDDDDDDDDKSDATESDGEESDSENSESENSESEKIDPEKDY
 451 AKKSYPEKSHPEKSYPEKSHPEKSYPEKSHPEKSYDEQAEAEKVKEESKE
 501 KAYPVSHSISSHGSIAADTAFLLENLDWETLVHENLPGLMDMDQDDRIVWP
 551 RDSLFRYFELLEKLQYNLEERKKLQEFQVQALMSFEDK

B)

Catsper 2	VI-----DSSVFSKFIISLIFLNTFVLMVEIELMESTNTALWPVKLALEVADWFILLSFIV
Catsper 1	MILSLTQSLGFETFIFIVVCLNTVILVAQ-TFTELEIRGEW---YFMVLDISIFLSIYVL
Catsper 2	EILLMWLASFSLFWKDawnVFDFVTLLSLLPELVVLLGVPAHSVW-LQLLRVCRLRS
Catsper 1	EAVLKLIALGLEYFYDPWNNLDFIMVMVALDFVLLQINSLSYSFYNHSLFRILKVFKSM
Catsper 2	KLFARFRQI-KVILLALVRALKSMTFLLMLLLIFYI FAVTGVYFFREYSRSTIEGLEYN
Catsper 1	RALRAIRVLRRLSILTSILHEVAGTLSGSLPSITAILTLMFTCLFLFSVVLRALFQDSDPK
Catsper 2	M <u>FE</u> SDLLNSLVTVFILFTLDHWYAVLQNIWKVPESSRVFSSIYVILWLLGSIIFRNIII
Catsper 1	R- <u>FQNIFTTLFTMLT</u> EDDWSLIY-IDNRAQGAWYIIPILMIYIVIQYFIFLNVI
Catsper 2	A-MM
Catsper 1	AVLV

FIGURE 1

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